GSM&PSTN FWT-8848 (Gateway)

User's Manual

GSM&PSTN FWT-8848 Version 1.1 -2010

1, General Description

GSM+PSTN fwt with LCR has the function to choose route automatically.
When you dial from GSM+PSTN fwt, it will check the prefix no. you preset into device. Then it will call out through GSM or PSTN according to your presetting rules. And GSM /PSTN both support call in .

When you are in the phone call through GSM, and at the same time, another phone call to pstn line, the caller will hear busy tone. And vice versa.

It will dial out through GSM if you don't connect to PSTN or PSTN line is disconnected, and it will dial out through PSTN if you don't insert SIM card or GSM network no signal.

Available:

- GSM 900/1800Mhz dual band, employing Wavecom Q2403A,SIM500W module to make;
- GSM 900/1800/1900Mhz Tri-band, employing Sim300z module to make;
- GSM850/900/1800/1900Mhz Quadband, employing M10, SIM540W module to make.

Appearance and Structure

Item	GSM&PSTN FWT-8848	Remark
Appearance		White/black
Material	ABS (Acrylonitrile Butadiene Styrene)	
Dimension	170mm×118mm×30mm	Excluding antenna
Weight	400g	Weight of Main unit
Power Switch	Rocker switch	
Power Socket	12V DC input	
Phone interface	RJ11	2 RJ-11 ports
Antenna interface	SMA-female	
LED display	No.1: Power, No.2.in use, No.3, in talk, No.4, Battery, if have, No. 5-7, Signal strength	From left to right(front side view)

Front side	LEDs display for Signal strength, Power, Working Status,Talking and Battery indicator;	
Rear side	1pcs SMA antenna connectors, 2 RJ-11 output, Power port and switch;	
Bottom side	1pcs Sim card holder slots, you can insert Sim card into the slot .	

2, Features:

1) Auto-select economic route (Low cost routing-LCR function)
2) GSM isn't ready, call will be forced to dial out from PSTN.
3) When not connecting to PSTN line, GSM will provide the forced dial-out function
4) Simple to install and easy to maintain
5) Steady module and reliable design ensures good performance
6) Provides optimized circuit directly connecting the exchange device for extensions
7) Compatible to most telephones, PBX device.
8) Strong signals with high gain antenna
9) Attractive plastic casing
10) SIM card supported (1.8V, 3V)
11) Caller ID display
12) Provides reversal polarity signal for metering
13) No noise and clear voice
14) Suitable for wide voltage range and low power consumption
15) Suitable for all kinds of weather and environment
16) RJ-11 ports (1 fxo for pstn line and 1 fxs port)
17) Locking PIN / network (optional)

3,Technical Specifications

Air interface standard: GSM850/1900Mhz,900/1,800Mhz phase 2+ full band
Frequency ranges:

A) GSM 850
I) Transmission: 869.2 ~ 893.8MHz
Ii) Reception: 824.2 ~ 848.2MHz

B) GSM 900:
I) Transmission: 890 ~ 915MHz
Ii) Reception: 935 ~ 960MHz

GSM 1900:
I) Transmission: 1, 930 ~ 1, 990MHz
Ii) Reception: 1, 850 ~ 1, 910MHz

GSM 1800:
I) Transmission: 1, 710 ~ 1, 785MHz
Ii) Reception: 1, 805 ~ 1, 880MHz

Phone interface: supply RJ-11 Phone Interface
Hanging voltage: 45V
Picking off voltage: 30mA / 41mA

Dialing tone Frequency: 450Hz
Antenna interface: Antenna amplifying>2.5db
Sensitivity:<-104DBM
Transmitting power<3W

Color: White /Black (optional)
AC-Adapter interface: Input: AC 110~240VAC 50~60Hz
Output: 12DC 1A.

AC-Adapter type: EU, US, AU, British can be optional

4, Operation Circumstance:

Operation temperature: -10c~60C
Storage temperature:-20C~70C
Operation humidity:45%-95%
Atmosphere pressure:86-106Kpa
Environment noise: <60DB
Transmitting Power:2W
Sensitivity: <-104dbm
Antenna Amplifying: >2.5db
Dialing frequency: 450Hz
Hanging voltage: 45V
Picking current: 30mA/41mA

5, Packing List

Name	Quantity	Remark
GSM&PSTN FWT-8848	1pcs	Dual band or Quadband
Ac- adapter	1pcs	AC-110-240V, DC12V/1A
Antenna	1pcs	Magnetic Antenna with 3m cable
User's Manual	1pcs	English

G.W: 0.75kg per unit. 20pcs/CTN, 16kg /CTN, CTN Size: 55cmX34.5cmX32.5cm

6, Installation and Connection

The Condition for Installation

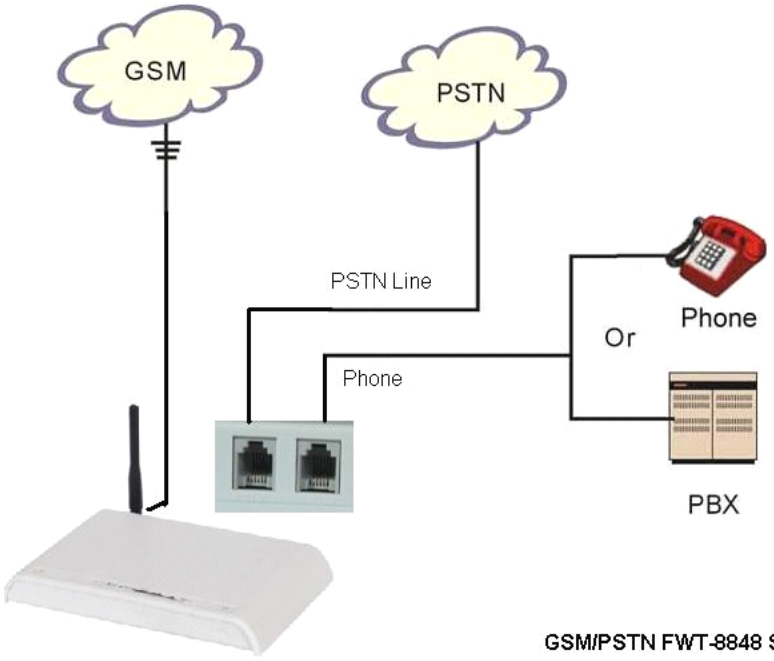
The terminal asks for 110- 220V AV power supply. It must be installed in the area where the GSM network can cover. The strength of the signal can affect the quality of voice.

1. Screw off the screws that are on the back of the terminal, Insert SIM card for every Sim card holder, and then tighten the screws.

2. Install antenna. In order to ensure the quality of voice, antenna must be put beyond 1.5 from the telephone and terminal.
3. On end of the telephone line connects to the “Phone” port of the terminal, the other end connects to telephone.
4. “Power” port connects to power adapter that is connected to 110-220V AC power supply.

The Installation for Connecting to PSTN &Ordinary Telephone

The Sketch for connecting to PSTN And Ordinary Telephone set.



GSM/PSTN FWT-8848 Structure

Draw your attention: Because there are many types of ordinary telephone and their electric parameters are different. In order to avoid mutual disturbance between telephone and terminal and affect voice quality. The distance between telephone and terminal is 1.5m at least.

7, Function Setting

Before you do the following function settings, Lift handset or press hands free key of telephone set, then you can press the buttons according to the following instructions to finish setting, you will hear 2 beeps when you finish, this testify setting successfully.

I) GSM/PSTN routing setting

Setting guide

*#21#01*00#### set the prefix of phone number to dial thru PSTN, 21---Command, 01-serial no., 00--prefix no. Maxium 5 digit, if not enough, use "#" to substitute.

E.g.
*#21#01*00#### set all number with prefix 00 call out through PSTN.

*#21#01*0755## set all number with prefix 0755 call out through PSTN.

Default setting:

*#21#01*1#####
*#21#02*2#####
*#21#03*3#####
*#21#04*4#####
*#21#05*5#####
*#21#06*6#####
*#21#07*7#####
*#21#08*8#####
*#21#09*9#####
*#21#10*00####

Default setting: Prefix 1 to 9 and 00 numbers call out through PSTN. Other numbers call out through GSM.

II) Other Optional Function Setting

1) Restore to factory default setting

*#99#99# restore to factory default setting.

2) Adjust dial interval

*#01#30# , 01--command，30--time，Max 9.9 seconds，Min 0.5 seconds, default setting is 3 seconds.

*If you use GSM&PSTN FWT-8848 for connecting to VoIP gateway, you can set dial interval as 0.5 second, it can make PDD<5 sec (Method: *#01#05#);

*If you use GSM&PSTN FWT-8848 for connecting telephone, PBX, billing device, you can set dial interval as 3 seconds or 5 seconds as you like (Method: *#01#30#, set the dial interval as 3 seconds).

3) Adjust Earphone Volume

*#02#15# 02--command，15--volume，Max 16，Min 1, default setting is 15.

4) Adjust Mic. Volume (sensitivity)

*#03#10# 03--command，10--amount，Max 16，Min 1, default setting is 10.

5) Setting local area code

*#04#*0755# 10--command，*0755—area code，Max 5 numbers, use "*" instead if area code is less than 5 digits.

6) Setting IP numbers

#05#17911# 05--command，17911—IP numbers，Max 5 numbers, use "" instead if IP number is less than 5 digit.

7）Hide Caller ID (been sent out)Setting

*#13#01# 13--command，01--value，Max-02，Min-00 Default setting is 00

00-- presentation indicator is used according to the subscription of the CLIR service

01 – CLIR allowed

02 – CLIR prohibited

Notice: This Setting needs GSM carrier support.

8) Bar incoming call setting

*#14#00# 14--command，00--value，00--no barring, 01--set barring default setting --00

9) FSK setting (optional) (should confirm before order)

*#17#00# setting caller ID

17-order, 00-value, 00-DTMF, 01-FSK, default setting is 00

This setting need terminal has FSK Chip set support

10) Billing Mode setting

*#15#00#

15--command, 00-value, 01-reversal polarity, 02-12 KHz, 03-16 KHz, default setting-- 01

11）IMEI change Setting (for Quad Band M10 Module only)

1. Write IMEI to RAM

*#18#IMEI no.#, 18--command, IMEI No. --15-digit IMEI no.

2. Check IMEI, if it is right, and then write it to module.

*#19#IMEI no.#, 19--command, IMEI No. --15-digits IMEI No.

Notice: Step 1 and Step 2, IMEI no. must be same.

12) Pin Lock &Network Lock Setting (optional)(Should confirm before order)

2) PIN Lock

1, Set to open PIN code check and automatic PIN lock function

***#07#*1234#** 07-command, 1234- the current SIM card PIN code

If set successfully, the device will open PIN code check, and automatically change the current SIM Card into "PIN on" from "PIN off"

2, Set to close PIN code check and automatic PIN lock function

***#08#*1234#** 08-command, 1234- the current SIM card PIN code

If set successfully, the device will close PIN code check and automatic PIN lock function.

3, Set to change PIN code, open automatic PIN lock function

***#09#1234*56785678#** 09-command, 1234- the current sim card PIN code, 5678-new PIN code. (5678 can be any other 4 digits number, suppose you can use 2009).

If set successfully, the device will change the current sim card PIN code as you want.5678, or the any other 4 digit PIN codes, and open automatic PIN lock function.

2) Network Lock

1, Set to open Network lock function

***#10#01234#** 10-command, 01234-password

2, Set to close Network lock function

***#11#01234#** 11-command, 01234-password

3, Set the Network codes

***#12#1*46003*46003#** 12-command, 1--No. Of IMSI, 46003--the IMSI code for China Telecom

***#12#2*46000*46000#** 12-command, 2--No. Of IMSI, 46000--the IMSI code for China Mobile

8, Making Calls and Answer Incoming Calls

Making Calls

1. Lift the handset or press “hand-free” key, you will hear dialing tone, then you can dial the telephone numbers you want to call.
2. Dialing: dialing the telephone numbers you want to call
3. On completion of dialed digits, you can press “#” to transmit the called telephone numbers. If you don’t dial any key for continual 3 seconds during the dialing, terminal transmits called telephone numbers automatically.
4. During calls, if the telephone numbers is not free ones, the terminal sends out anti-polarity signal.
5. If the calling party or called party hangs up, the terminal stops sending out anti-polarity signal.

Answering Incoming Calls

When some calls are coming in, if the connected telephone has the function of displaying incoming calls, the telephone rings and displays the incoming telephone numbers. Now users can lift the handset or press “hand-free” to answer it.

Warranty Card

Please fill in the blanks carefully, and keep it properly as the voucher for warranty.

Type of Equipment	GSM FWT-8848		
User's name		Contact with:	
Contact Tel.no.			
Address			
Date of Ex-works			
Date of Maintenance	Damage	Management	Maintainer
Sales Agent (Stamp)		Purchasing Date	